DOCUMENT RESUME

ED 042 678 SO 000 246

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TITLE	The Relationship Between Student Interest and Student Learning with New Curricular Materials.
INSTITUTION	American Educational Research Association, Washington, D.C.
SPONS AGENCY	National Science Foundation, Washington, D.C.
PUB DATE	6 Feb 69
NOTE	9p.; Paper presented at the Annual Meeting, American Educational Research Association, Los Angeles, California, February 6, 1969
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.55
DESCRIPTORS	Academic Performance, Correlation, *Curriculum Evaluation, Evaluation Techniques, *Field Studies, Inductive Methods, *Inquiry Training, Interest Scales, *Senior High Schools, Social Studies, *Sociology, Student Motivation
IDENTIFIERS	*Sociological Resources for the Social Studies, SRSS

ABSTRACT

"How interesting did you find the material in the unit which you just completed?" This and other questions were asked in a student questionnaire during the field testing and evaluation of twelve short units, "Episodes in Social Inquiry Series", developed by the Sociological Resources for the Social Studies Project. By assigning values to these responses, it was possible to generate an index of student interest. Other data sources for this evaluation were a thirty-five item multiple-choice test on a unit completed, and a verbal ability test to measure student ability. Since tests had not been standardized, it was necessary to consider each episode separately. To control student ability, the classes were divided into four ability groupings. Each ability group studying each episode (48 cases) was ranked by the class mean on the multiple-choice test and by the index of student interest in that episode. Only about a third of the cases illustrated a marked positive correlation between interest and performance, because as ability level decreased the correlation between interest and performance also decreased. The effect of the teacher background and preparation variable is reported in ED 035 583. Another related document is SO 000 245. (SBE)

ED0 42678

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THE RELATIONSHIP BETWEEN STUDENT INTEREST AND STUDENT LEARNING WITH NEW CURRICULAR MATERIALS

BY

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SOCIOLOGICAL RESOURCES FOR THE SOCIAL STUDIES

PAPER PRESENTED AT THE ANNUAL MEETING OF THE
AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

LOS ANGELES, CALIFORNIA
FEBRUARY 6, 1969

SP 000 246

Sociological Resources for the Social Studies has, as one of its principal tasks, the development of a series of short curriculum segments, referred to as episodes. Each episode deals, in a sociological framework, with a single topic. They vary in length, but all are designed to cover approximately two weeks of classroom time.

In development of any curriculum materials a great deal of consideration is given to producing materials which are interesting. However, there are elements of any curriculum which, though vital, are not inherently interesting to students. How relevant then, is student interest to student learning?

Between January, 1967 and June, 1968 twelve SRSS episodes were taught for evaluation purposes. Each was taught to several hundred students in various parts of the United States. Among the data sources for this evaluation were a thirty-five item multiple-choice test, administered to both stimulus and control groups, and a questionnaire, completed by students at the end of the episode. Student ability was also measured by means of a verbal ability test for which national percentiles for twelfth grade students were available.[1]

Preliminary data showed that, in all cases, the mean score on the multiple-choice test was several points higher for the stimulus group than for the control. There was also a generally high correlation between ability and test scores. However, the correlations between test scores and the interest expressed by students varied greatly. It was decided, then, to pursue the question of student interest somewhat further.

Procedure

The data available consisted of mean scores for each class on the tests, number of students in each class, and number of responses to each alternative of the several check-off type questions on the student questionnaire.

The meaningful question for this report was the one which asked students "How interesting did you find the material in the unit which you just completed?" They were to check one of the following: very interesting; somewhat interesting; average; somewhat uninteresting; very uninteresting. By assigning values to these responses, from one for very uninteresting to five for very interesting, it was possible to generate an index of student interest. This index was generated by adding the weighted totals and dividing by the number of students responding.

The following list gives the episodes considered in this paper, in descending order of the overall index of student interest:[2]

Interest Index	Episode
3.47	The Incidence and Effects of Poverty in the United States
3.44	Stereotypes
3.44	Negro Leadership in the United States
3.37	The Sociology of Religion
2.98	The Family in Three Settings
2.95	Hypothesis Testing in the Social Sciences
2.89	Social Mobility in the United States
2.67	The Changing Face of American Science
2.66	From Home and School to Work
2.51	Looking at the Social World through Tables
2.50	Family Roles
2.50	Some Prerequisites of Democracy

Since the tests had not been standardized it is necessary to consider each episode separately. To control for student ability the classes were divided into four ability groupings, based upon the class mean score on the verbal ability test. The four ability groupings had as their lower limits the zero, thirtieth, fiftieth and seventy-fifth centiles (for twelfth grade students).

For each ability grouping of students studying each episode the classes were ranked by the class mean for the thirty-five item test and by the index of student interest in that episode. The coefficient of rank-order correlation between these two dimensions was then computed. The accompanying table shows these correlation coefficients.

Findings

In the table all cells which contained three or fewer cases have had an X drawn through them. This was done arbitrarily on the assumption that a rank-order correlation of three cases has a very low level of statistical significance. Of the remaining thirty-nine cells, twelve show a positive correlation of .15 or greater, sixteen show a positive correlation less than .5, and eleven show a negative correlation. Summarizing this gross picture in only about a third of the instances is there a marked positive correlation between interest and performance. Let us, however, examine the data closer to see if there are any patterns or trends.

For the highest ability grouping, the correlation between interest and performance is consistently positive; in six of the eight cases this positive correlation is .5 or greater.

It will be remembered that an interest index of three indicates "average interest". Any interest index less than three indicates that the students generally classed the material as uninteresting and above three that they classed it as interesting. In this context, the eight episodes which had an interest index less than three all exhibit a consistent decrease in the correlation between interest and performance as the ability level decreases. The episodes with an interest index greater than three show no such regular trend.

Episode	Mean Ability Level of Class (in centile rank for 12th grade)			
	Above 74	74-50	49-30	Below 30
The Incidence and Effects of Poverty in the United States	-1.00 (3)	+.28 (13)	+.40 (9)	+.60 (6)
Stereotypes	+.62 (9)	-.02 (13)	+.21 (14)	+.70 (5)
Negro Leadership in American Society	+.80 (4)	+.28 (13)	+.90 (5)	+.40 (8)
The Sociology of Religion	+.50 (6)	-.03 (18)	-.11 (9)	+.94 (7)
The Family in Three Settings	+.80 (4)	+.56 (13)	+.50 (10)	+.30 (5)
Hypothesis Testing in the Social Sciences	+.20 (10)	-.19 (11)	-.60 (4)	no cases (0)
Social Mobility in the United States	+.50 (3)	+.29 (8)	-.60 (5)	-.50 (3)
The Changing Face of American Science	+.09 (7)	+.02 (13)	-.09 (8)	-.40 (4)
From Home and School To Work	one case (1)	+.10 (10)	-.09 (11)	-.70 (5)
Looking at the Social World through Tables	+1.00 (4)	+.46 (11)	+.30 (5)	-.50 (3)
Family Roles	+1.00 (2)	+.21 (18)	+.20 (4)	-.50 (3)
Some Prerequisites of Democracy	+.50 (6)	+.15 (13)	-.50 (5)	+1.00 (3)

Rank order coefficient of correlation between student interest and performance for each of 12 SRSS episodes, with classes at four Mean Ability Levels. (Figure in parentheses is the number of classes in that cell.)

For eight of the twelve episodes the teachers were asked if they thought the material was interesting, with the same rating scale. Unfortunately, the rate of return of teacher questionnaires was very poor for those eight episodes. Also unfortunately, the question was inadvertently omitted from the questionnaire which went to teachers for the other four episodes. The results are too sketchy for any respectable analysis. However, a cautions inspection indicates that there may be a decided positive correlation between teacher interest and student performance at all levels of ability.[3]

Conclusions

With students of high ability there is a generally high positive correlation between their interest in the material and their performance. It is likely that these students are generally successful in school; consequently they are able to achieve passing grades without much effort so they give most of their attention to that which interests them.

For material which is generally regarded as uninteresting, the better the students the greater is their tendency to do well when it interests them and poorly when it doesn't. Material which has high intrinsic interest, on the other hand, shows no such regular pattern.

For the very bright students the interesting topics are expanded to provide enrichment. Some poor students either have so little ability and motivation that, generally, they don't perform well in any academic pursuit even when it interests them. Other students in this category may be struggling to achieve, and concentrating on necessary basic skills so they have less time for that which interests them. However, when the material is exceptionally interesting, these considerations fade.

In a sense, what I have said justifies the practice of creating highly interesting materials for a particular category of students. It suggests that if we can identify those students who, having low verbal skills, are either marking time or completely frustrated, we can help them to get some meaning and value from school by creating materials which have high interest. To do so we must sometimes sacrifice significant content. However, these data do not, in my opinion indicate such a procedure for the rest of the students.

Perhaps the best case I can make is to point to the episode "Hypothesis Testing in the Social Sciences". The topic of this episode is important. However, teachers expressed considerable misgivings about it, and the student interest index was below three. But the students showed a remarkable grasp of the subject. One topic in that episode was the use of chi-square. Teachers, almost without exception, reported that both they and their students disliked and had difficulty with this concept. Yet, on four of the five questions asked about chi-square the students who had studied the episode did extremely well. This episode showed a very low correlation between interest and performance for highest ability students; it showed negative correlation between interest and performance for all other students. They didn't like this important topic, but they learned it fairly well!

It may well be that interest to the teacher is a more important determinant of student success than interest to the student. This is a question which can stand further research. There are, of course, other variables which can enter in. One of these, that of teacher background and preparation in the subject area is the topic of a companion paper to this one, being prepared by William M. Hering, Jr. Research in progress now aims at a much more thorough look at the variable of teacher preparation and at a factor which is a bit more difficult to assess, but

nevertheless important, the extent to which a given classroom is oriented toward the encouragement of open discussion.

To be sure, we all want to make any material as interesting as possible—and nothing in this paper suggests anything different—but our tentative findings do, I think justify saying that curriculum writers should not become enmeshed in a "popularity contest". If, for example, students are to gain a full and genuine appreciation for the social sciences, they must be exposed to tables, charts and statistics. Many students, and teachers too, have a negative set toward these things. Our experience indicates that in spite of this negative set a large proportion of students will learn about them.

* * *

FOOTNOTES

(1) A detailed description of SRSS evaluation procedures appears in an unpublished paper read at the 1967 annual meeting of the American Sociological Association (R.C. Angell & F.L. Grahlfs: "The First National Trials of SRSS Episodes") availabe from SRSS, 503 First National Building, Ann Arbor, Michigan 48108.

(2) No SRSS materials have been published yet. After national evaluation trials they are subjected to extensive review and revision. Following this final revision they are to be published by Allyn and Bacon. The first of them to be published are scheduled to hit the market in late 1969.

(3) The correlation between teacher interest and student interest was .74.

The correlation between student ability and student interest for any episode fell between -.21 and +.09.

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